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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.           | CONFIRMATION NO. |
|---|-------------|----------------------|-------------------------------|------------------|
| 10/718,101  | 11/18/2003  | Jack Y. Peng         | 27140.010                     | 9904             |
| 21907 7590 03/23/2007<br>ROZSA LAW GROUP LC<br>18757 BURBANK BOULEVARD<br>SUITE 220<br>TARZANA, CA 91356-3346 |             |                      | EXAMINER<br>SMITH, NICHOLAS A |                  |
|   |             |                      | ART UNIT<br>1742              | PAPER NUMBER     |
| SHORTENED STATUTORY PERIOD OF RESPONSE  |             | MAIL DATE            | DELIVERY MODE                 |                  |
| 3 MONTHS  |             | 03/23/2007           | PAPER                         |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/718,101

Applicant(s)

PENG ET AL.

Examiner

Nicholas A. Smith

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### **Status of Claims**

1. Claims 1-22 remain for examination.

### ***Claim Objections***

2. In view of Applicant's amendments submitted on 22 December 2006, objections to claims 1, 14 and 18 have been withdrawn.

### **Status of Rejections**

3. In view of Applicant's amendments submitted on 22 December 2006, the rejection of claims 1-22 under 35 U.S.C. 112, first paragraph have been withdrawn.

### ***Oath/Declaration***

4. The affidavit under 37 CFR 1.132 filed 22 December 2006 is insufficient to overcome the rejection of claims 1-22 based upon new reference by Nayar (US Patent 4,126,451) set forth below. Examiner notes that affidavit presents evidence that it is well known that Boral has degradation and safety issues.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2, 4-5, 7-15 and 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Nayar (US Patent 4,126,451).

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7. In regards to claim(s) 1, Nayar discloses a method of producing a framed-metal-matrix-composite-sheet from a powder mixture (abstract), comprising: producing said powder mixture by mixing a matrix metal powder and at least one reinforcement material (col. 3, line 49 to col. 4, line 5); loading said powder mixture into a metal frame to form a framed mixture, further comprising compacting said framed mixture to form a framed compact having the claimed theoretical density (col. 2, lines 37-43; col. 2, lines 48-50); consolidating said framed compact to form a framed-billet that is in the claimed theoretical density (col. 2, line 59 to col. 3, line 15; col. 3, lines 36-44), wherein said consolidation further comprises degassing of said framed compact to form a degassed-framed-compact (col. 2, lines 57-59); and rolling said framed-billet to said framed-metal-matrix-composite-sheet to form a plate/sheet without edge cracks (col. 4, lines 48-63).
8. In regards to claim(s) 2, 4-5 and 7-12, Nayar discloses the claimed matrix metal powder materials and reinforcement materials as well as the metal frame limitations (col. 2, lines 28-62; col. 11, line 53 to col. 12, line 32).
9. In regards to claim(s) 13-15, Nayar discloses the steps as stated above in paragraph 6. Furthermore, Nayar discloses heating in a controlled environment at the claimed degassing temperature for the claimed degassing time period (col. 6, lines 25-58). Furthermore, Nayar discloses the claimed gas (or lack thereof) environments (col. 6, lines 25-58).
10. In regards to claim(s) 17-18, Nayar discloses a consolidation temperature that meets the claimed limitation (col. 2, lines 59-62; col. 7, lines 15-24; Table II).

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11. Claims 3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Nayar (US Patent 4,126,451) as stated above in paragraphs 6-7, and as evidenced by Lowrance, II et al. (US Patent 5,382,405).

12. Nayar discloses a mesh size (col. 12, lines 3-10), but does not specifically disclose the particle size with that mesh. Lowrance, II et al. evidences such a mesh size meets the claimed limitation (Lowrance, II et al., col. 20, line 7-39).

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nayar.

15. Nayar discloses the claimed steps as stated above in paragraphs 6, 8 and 9. Furthermore, Nayar discloses consolidating as sintering (col. 4, lines 6-30; col. 11, line 53 to col. 12, line 32; Table II).

16. However, Nayar does not specifically disclose a pressing (compacting) at room temperature to form a framed compact to the claimed density.

17. Nayar teaches that compaction to high densities can be achieved by applying higher pressure (col. 6, lines 6-7). It would have been obvious to one of ordinary skill in the art to modify Nayar's method with Nayar's step of applying appropriate pressure to achieve the proper density (and thus meeting the claimed density) because Nayar

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teaches density after compaction is a result-effective variable dependent on the applied pressure (Nayar, col. 6, lines 6-7).

18. In regards to claim(s) 20-21, see reasons stated above in paragraph 8.

19. Claims 16 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nayar in view of JP 61194101 A (JP'101).

20. Nayar does not specifically disclose a controlling environment for degassing using air.

21. JP'101 discloses degassing metal powder in air (abstract). It would have been obvious to one of ordinary skill in the art modify Nayar's method with JP'101's degassing controlled environment because JP'101 teaches such degassing using air is conventionally used to produce a billet (JP'101, abstract).

### ***Response to Arguments***

22. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection, please see above.

### ***Conclusion***

23. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

24. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas A. Smith whose telephone number is (571)-272-8760. The examiner can normally be reached on 8:30 AM to 5:00 PM, Monday through Friday.

26. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571)-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

27. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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